Name:_____

Per:____

I. Title: Colligative Properties: Boiling Point Elevation of Water

II. Purpose: To study the effect concentration has on the boiling point of a solution

III. Procedure:

1. Place about 200 ml of water in a 250mL beaker. Add 2 boiling chips
2. Set up your ring stand so the hottest part of the flame is directly on the wire gauze. When set up, heat the water to boiling. Remember to support your thermometer so the bulb is submerged, but not touching the bottom
3. While your water is heating, weigh out four 3.0g samples of NaCl and place each in a clean, dry test tube
4. Record the temperature when it is constant for 2 minutes at 30 sec intervals.
5. Turn off the burner
6. Using another beaker of water, replace any water lost during boiling
7. Carefully and slowly add one 3.0g sample of NaCl, stir until dissolved (Don't stir with your thermometer, it will break). Reset the thermometer in the water at the same depth.
8. Repeat the boiling process until all NaCl samples have been added
9. To clean up, pour as much of the water down the drain as you can, then pour the remaining water and the boiling chips into the beaker at the front of the room

IV. Data

	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5
Mass NaCl	0.00g	3.0g	6.0g	9.0g	12.0g
BP w/NaCl					

V. Calculations:
Create an X-Y line graph representing the relationship between the mass of salt added and the boiling temperature of the water. Begin your temperature scale at 90°

VI. Conclusions.

Explain, on a molecular level, why you believe the addition of a solute causes the boiling point of the solvent to increase. Remember what you already know about intermolecular forces and boiling.